

Customer No.: 31561
Application No.: 10/065,647
Docket No.: 8834-US-PA

REMARKS

Present Status of the Application

The Office Action rejected all presently-pending claims 1-12. Specifically, the Office Action also rejected claims 1-12 under 35 U.S.C. 103(a) as being unpatentable over Kondo (U.S. 6,777,888) in view of Troxell (U.S. 5,177,406). Applicants have amended claim 1. After entry of the foregoing amendments, claims 1-12 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Office Action Rejections

The amended portion in claim 1 has been described in paragraphs [0010], [0016] and [0027] of the specification.

Applicants respectfully traverse the rejection of claims 1-12 under 103(a) as being unpatentable over Kondo (U.S. 6,777,888) in view of Troxell (U.S. 5,177,406) because a prima facie case of obviousness has not been established by the Office Action.

To establish a prima facie case of obviousness under 35 U.S.C. 103(a), each of three requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to combine the references in a manner resulting

Customer No.: 31561
Application No.: 10/065,647
Docket No.: 8834-US-PA

in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of the three requirements must "be found in the prior art, and not be based on applicant's disclosure." See M.P.E.P. 2143, 8th ed., February 2003.

The present invention is in general related to a driving circuit design for a display device as claim 1 recites:

Claim 1. A driving circuit design for a display device having a plurality of pixels with each pixel including a driving thin film transistor and an organic light emitting diode, the design comprising:

each pixel receiving an identical data voltage; and
modifying the driving current generated by the driving thin film transistor through the adjustment of the channel width/length ratio of the driving thin film transistor so that the luminance of red light emitted from a red organic light emitting diode, the luminance of green light emitted from a green organic light emitting diode and the luminance of blue light emitted from a blue light emitting diode are in such a ratio that white light is produced and full coloration is attained.

The office action points out although Kondo does not disclose that each pixel receiving an identical data voltage; and modifying the driving current generated by the driving thin film transistor through the adjustment of the width/length ratio (Wt/Lt) of the driving thin film transistor so that the luminance of red light emitted from a red organic light emitting diode, the luminance of green light emitted from a green organic light emitting diode and the luminance of blue light emitted from a blue light emitting diode are in such a ratio that white light is produced and full coloration is attained, Troxell teaches that the above missing features. However, Troxell teaches varying the width of the channel 36 to vary the on-current which flows through the pixel (col. 10, lines 25-27). In an example, the ratio of the widths of the

Customer No.: 31561
Application No.: 10/065,647
Docket No.: 8834-US-PA

channels for the red: yellow-green: blue colored pixels is 2.9:1.0:5.8 (col. 12, lines 31-33). Troxell does not teach that adjusting the channel width/length ratio of the driving thin film transistor so that the luminance of red light emitted from a red organic light emitting diode, the luminance of green light emitted from a green organic light emitting diode and the luminance of blue light emitted from a blue light emitting diode are in such a ratio that white light is produced and full coloration is attained. Therefore, the references combined do not teach or suggest each and every element in claim 1.

In particular, adjusting the channel width/ length ratio of the TFT device for each pixel to vary the on-current value has an advantage of that the TFT device can be more designable, especially when the width of the channels of the TFT device is reduced. For example, if the on-current ratio for R: G: B pixels is required as 2:1:3, the channel width/length ratio for R: G: B pixels maybe 10um/10um: 5um/10um: 15um/10um when the channel width is merely considered. In the other word, the channel width of the TFT for blue pixel should be designed as 15 um. However, if the channel width/length ratios for R: G: B pixels are considered, the channel width/length ratio for R: G: B pixels maybe 10um/10um: 5um/10um: 10um/7.6um. The channel length for Blue pixel can be reduced to 7.6 um.

For at least the foregoing reasons, Applicant respectfully submits that independent claim 1 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claims 2-12 patently define over the prior art as well.

Customer No.: 31561
Application No.: 10/065,647
Docket No.: 8834-US-PA

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-12 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

Date :

Dec 28, 2004

Belinda Lee

Belinda Lee

Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jicpgroup.com.tw
Usa@jicpgroup.com.tw